12.0 Receiving/Distribution

Functional requirements

Priority - Highest

- Barcodes on ***all*** packages. Currently, JIT packages are the only orders received with usable barcodes. If the other 50,000 "Name only" packages (*received annually*) had a barcode on them, thousands of labor hours would be eliminated opening packages and calling users.
    1. Develop program that allows vendors to dial-up the Internet (*BUS WWW Homepage*), enter a purchase order number, and print a barcode for the packing slip or package. This ability would allow anyone in the world to put a barcode on our package.
    2. In place of printing barcodes from the Internet, fax a barcode to the vendors to put on our packages. Or, put the barcode on all purchase orders.
- If barcodes are not possible on all incoming packages, then more reliable customer information (e.g. correct drop points and mail stops) is necessary. Since many orders are received with only a user name on it, manual lookups must be performed to locate the owner (e.g. J. Smith). This is very time consuming and inefficient.
- Real-time transactions (as opposed to Batch processing). The present computer system requires that data be taken from one system and transferred to another system at one specific time each day. A real-time system would update associated files when a change occurs.
- Use standardized data transfer protocol to outside of LANL (e.g. EDI - *Electronic Data Interchange*). EDI should be made the data interchange standard that LANL uses to transmit and receive data to and from vendors (e.g. *Fed Ex*).

Priority - Middle

- Automatic electronic delivery notification to customers. (e.g. *E-mail*). This feature will send users an E-mail message telling them that their package has been delivered.
- Operating reports and graphs demonstrating receipt/delivery cycle times and costs. TIPS should generate management reports that demonstrate pertinent operating data.
- Customer satisfaction data regarding BUS-4 strengths and weaknesses. TIPS should also allow for the collection of customer satisfaction data. A generic data collection screen should be available to all that use the system (e.g. *BUS Homepage on the Internet*)
- Complete and timely system documentation. Current systems do not have adequate documentation. Documentation is required for training personnel.
- Inventory control (*w/bar code interface*) for gas facility gas bottles, trailers, and dewars. TIPS should interface with ACIS computer system to track deliveries for DOE regulations.

- Improved Recharge collection system. The compressed gas facility recharges customers for dewars, gas bottles, and trailers. We would like this recharge to happen automatically when the customer places an order.
- Ad hoc reports (*User definable*). TIPS should be flexible enough so that users can generate reports that will help them manage their operation efficiently.
- Funds control. TIPS should validate all cost codes that are entered for purchase or recharges before a transaction is released.
- Improved system recovery (*need viable contingency plan*). Since TIPS will be an important tool, BUS Division will rely heavily on it and will not be able to work efficiently without it. The TIPS computer hardware system should be fault tolerant so that downtime will be minimized.
- On-line/Automated review and approval process.
- Eliminate duplicate data entry (e.g*. have TIPS do "lookups" and populate redundant data fields).*
- Eliminate receiving data entry.
- Eliminate or reduce freight bill auditing.
- Direct delivery (*if customer receives package*) screens for customers to use.
- Collect and integrate property, transportation, distribution, and regulatory compliance with the on-line purchasing system (*include JIT, etc*.).
- Develop centralized resource for validations (i.e. funds control, authorizations, etc.), regulations, SOPs, on-line help, etc.
- User-friendly interface (e.g. *GUI*) with "pull down" menus. Pull down menus are easy to use.

Priority - Lowest

- Labor capture (i.e. *time accounting*) interface. Magnetic card readers can collect labor data before, during, and after work processes for statistical purposes.
- Radio Frequency (RF) bar code scanners and computer terminals for delivery trucks. RF will allow drivers to input delivery status immediately into TIPS.
- TIPS should produce delivery reports. Reports should print drop points using the most efficient delivery sequence. This will ensure that we minimize our fuel and time.
- Develop state-of-the-art technology for barcoding and distribution systems.
- Provide automated capability for universal invoice status (e.g*. vendors, requesters, buyers, etc*.) - call up for information.
- System accessibility by other Laboratory groups.

Interface

- ATMS
- SMAC
- ACIS
- POIMS
- PAID
- SMART
- MAX
- PAIRS
- SIMS
- EIS

Management Issues and Decisions:

- Need accurate employee information for deliveries that require manual "look-up"[1].
- Eliminate redundant data entry.
- Need to integrate mail stops and drop points, where applicable.
- Define BUS operating strategy with respect to delivery policy (e.g. *direct deliveries, accounts payable, property accounting, and customer receiving responsibilities*)
- Use same software/hardware platform (e.g. not DEC *and* IBM, just *one* of them).

Summary

Presently, BUS-4 Receiving/Distribution processes are functioning with a number of different computer programs. Some are old and some are new; however, even though some processes have changed over the years, the information systems supporting them have not. Interfaces are made with many groups within the Laboratory and most of them are accomplished by telephone, fax, and E-mail.

Work flows smoothly in Receiving/Distribution when accurate information is available. The work is best accomplished when pertinent information is received with the customer's order. Problems arise when orders/packages (*this also includes customer returns*) arrive with inadequate information. In most cases, problem situations are created when vendors ship orders to the Laboratory without proper shipping/receiving information. In conclusion, a Laboratory approved barcode on all incoming packages will improve BUS customer satisfaction and eliminate the thousands of dollars required to process Laboratory material receipts/deliveries that arrive with inadequate shipping/receiving information.

[1] This process improvement is not within the realm of BUS-4 responsibilities; however, if this issue were corrected BUS-4 would eliminate many wasted deliveries and hours of rework time.